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## Forest Pest Management

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## Southern Pine Beetle, *Dendroctonus frontalis*

The Southern pine beetle (SPB) is one of the most destructive insect pests in pine and causes millions of dollars of losses in pulpwood and saw-timber throughout the southeast.

In Maryland, SPB is at the northern edge of its range and is commonly found on the lower Eastern Shore and Southern Maryland. SPB can attack all species of pine in Maryland, but most commonly attacks loblolly pine and occasionally Virginia pine.

SPB often occurs at low levels in pine forests, breeding in weakened or dying pines. Outbreaks develop following mild winters or hot, dry springs. Dense pine stands predominated by saw timber size trees are at high risk of SPB buildup. Healthy trees are able to “pitch” beetles out these holes. There may be three or more generations each year.

### *Recognizing the beetle and its damage.*

SPB is a small reddish-brown to black beetle less than the size of a grain of rice (2-4 mm). One of the first signs of SPB infestation is discoloration of the tree crown. Needles of infested trees turn yellow in 2-3 weeks, and then reddish-brown after a month.



Photo: U.S. Department of Agriculture Forest Service

The surface of trees attacked by SPB is covered by small pitch tubes that resemble small popcorn in shape and color. Under the bark SPB create winding S-shaped galleries. SPB carries and transmits a blue stain fungi to the tree which stops water from being transported throughout the tree.



The most commonly recommended control method is a salvage cut of the infested part of the forest. However, salvage is not always practical because of inaccessibility, insufficient volume, or poor lumber markets.





A salvage cut must remove all SPB-infested trees and a 50-100 foot buffer of green trees. Tree removal should begin with the green, buffer trees and proceed to trees with fresh attacks. Salvage should take place as soon as possible after the spot is identified.



If a salvage cut is not feasible other control options include cut-and-leave, chemical control, and pile-and-burn. Cut and leave requires infested trees and buffer trees to be felled towards the center of the infestation. Bark should be destroyed by composting, chipping, or burning. Most control efforts should take place from late spring through fall to control actively spreading spots.

The most effective long-term strategy for minimizing SPB losses is to maintain healthy stands through good forestry practices and protection of the site from damage. The removal of high-risk trees, such as those damaged by lightning, logging, or ice, will decrease the chances of SPB establishing.

The possibility of SPB attack, even in healthy stands, increases during periods of extreme drought and high beetle populations. There is little that can be done to prevent these conditions, but losses can be minimized by frequent stand inspections and timely control procedures.

The Maryland Department of Agriculture routinely conducts surveys of the counties with a history of SPB problems. Landowners may contact their county forester or MDA if they suspect a problem.

